WHAT IS CLAIMED IS:

1. A liquid crystal optical apparatus, comprising:

a pair of substrates;

a liquid crystal layer provided between the pair of substrates and formed of a liquid crystal material in which an aligning direction of liquid crystal molecules changes in accordance with a voltage applied thereto;

a plurality of first electrodes provided on one of the pair of substrates; and

at least one second electrode provided on the other of the pair of substrates,

wherein:

a frame period for applying a signal to the liquid crystal layer includes:

a first period in which a voltage is applied to the at least one second electrode, and a write signal for writing information to the liquid crystal layer is applied to one of the plurality of first electrodes, and

a second period in which a voltage is applied to the at least one second electrode, and a reset signal for deleting the information written in the liquid crystal layer in the first period is applied to the one of the plurality of first electrodes.

2. A liquid crystal optical apparatus according to claim 1, wherein a voltage of the reset signal has a polarity which is opposite to a polarity of a voltage of the write signal.

3. A liquid crystal optical apparatus according to claim 1, wherein the reset signal has a peak value which is substantially equal to a peak value of the write signal.

4. A liquid crystal optical apparatus according to claim 1, wherein a product of a peak value of the write signal and an application period of the write signal is substantially equal to a product of a peak value of the reset signal and an application period of the reset signal.

5. A liquid crystal optical apparatus according to claim 1, wherein the liquid crystal material having spontaneous polarization.

6. A liquid crystal optical apparatus according to claim 1, wherein the liquid crystal material is a smectic liquid crystal material.

7. A liquid crystal optical apparatus according to claim 6, wherein when no voltage is applied to the liquid crystal layer, the liquid crystal molecules of the smectic liquid crystal material are aligned so as to provide a darkest display.

8. A liquid crystal optical apparatus according to claim 1, wherein when no voltage is applied to the liquid crystal layer, the liquid crystal molecules of the liquid crystal material are in one stable state; and when a voltage is applied to the liquid crystal layer, the liquid crystal molecules are put into another state in accordance with a polarity and a value of the voltage.

9. A liquid crystal optical apparatus according to claim 1, wherein the liquid crystal material has a bistable state.

10. A liquid crystal optical apparatus according to claim 1, wherein:

at least one of the plurality of first electrodes is a pixel electrode,

the pixel electrode is connected to an active

element corresponding thereto, and

the active element is connected to a source electrode and a gate electrode which substantially cross each other, and the active element is provided in the vicinity of an intersection of the source electrode and the gate electrode.